

**REMARKS**

This Amendment is in response to the Office action (Paper No. 20080507) mailed on 14 May 2008. Re-examination and reconsideration are respectfully requested.

**Listing of The Claims**

Pursuant to 37 CFR §121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

**Status of The Claims**

Claims 1-39 are pending in the application. Claims 13, 17-30 are allowed.

**Amendment of The Claims**

Claims 1, 6, 9, 14-16, and 31 are amended in response to the Examiner's rejections.

**Issues Raised by Paper No. 20080507**

**Claim Rejection under 35 U.S.C. §112**

**Claims 1-8 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The applicant's claims 1, 6 and 31 are amended according to Table 1 to define a limitation that a home location register stores information whether the phone number is located in an extension

wireless service area. Since the original filed specification fully supports this newly amended limitation, no new matter is introduced by this amendment.

Claim 1 defines a home location register which stores a database including information of a complex wireless terminal. The database has information indicating whether the complex wireless terminal is located inside or outside of an extension wireless service. In Claim 1, there is no attempt of defining a method of this information and in fact the method of obtaining the information is known in art. In stead, this information stored in the home location register is itself an essence basis of the applicant's automatic call forwarding service.

The Examiner is respectively asked to reconsider the amended Claims 1, 6 and 31.

#### **Claim Rejection under 35 U.S.C. §101**

**Claims 14-16 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.**

Paragraph [0317] and Claims 14-16 are amended in order to overcome the Examiner's rejection under 35 U.S.C. §101.

#### **Claim Rejection under 35 U.S.C. §103**

**I. Claim 9 is rejected under 35 U.S.C. §103 as being unpatentable over Sundar et al. (US 2003/0134650) in view of Kil (US 2001/0046859).**

The applicant's claim 9 is amended by incorporating the preamble into the body of the claim. No change has been made in the coverage of claim 9.

The Examiner in Paper No. 20080507 rejects the applicant's claim 9 by citing Sundar '650 and Kil '859. The Examiner asserts that it is obvious that the combination of Sundar '650 and Kil '859 teaches all the limitation of the applicant's claim 9. The applicant does not agree with the Examiner's conclusion and provides the following arguments.

**Applicant's Invention**

The applicant's invention solves problems existing in a communication system including wired and wireless networks, and the problems are "deterioration induced by retry of call establishment to another network due to failure of receiving a call", "narrow mobility range" and "disconnection of a speech when a user moves from the wireless networks to the wired networks or from the wired networks to the wireless networks" by introducing an automatic call forwarding service.

The applicant's invention is not limited in describing a method of realizing a mixed communication system as Sundar '650 does, but essentially focuses on the automatic call forwarding service based on a confirmation result of the registration location of the wireless terminal which solves the above three disadvantages of contemporary techniques.

One of embodiments of the automatic call forwarding service is as defined in the applicant's amended claim 9 as follows:

“....A method of a complex wireless service, comprising:  
performing, at a wired and wireless communication system including  
a complex wireless terminal for supporting plural band and plural

mode, a home location register for storing information whether the complex wireless terminal is located inside or outside an extension wireless service area, a mobile switching center for providing the complex wireless terminal with an automatic call forwarding and handoff, and a wired and wireless complex gateway for providing a communication through an extension wireless service network,  
location registration in the home location register when the mobile switching center receives a location registration signal from the complex wireless terminal;

confirming, when there is an incoming request for the complex wireless terminal, whether a location of the corresponding complex wireless terminal is registered in the mobile communication service area using the home location register by the mobile switching center; and

providing, when the location of the complex wireless terminal is registered in the mobile communication service area as a result of the confirmation, a communication through the base station controller and base station transceiver subsystem by trying to connect an incoming to the complex wireless terminal using the mobile communication phone number, and when the location of the complex wireless terminal is registered in the extension wireless network

service area as a result of the confirmation, the communication through a public exchange by trying to connect the incoming to the complex wireless terminal using the public phone number and the wireless terminal unique number.”

The applicant’s claim 9 defines three steps, i.e., the step of “performing” location registration of the corresponding complex wireless, the step of “confirming” whether the location of the corresponding complex wireless terminal is registered in the mobile communication service area, and the step of “providing” the communication for the incoming call by different paths and different phone numbers based on the confirmation result of the register location, and thus provides the automatic call forwarding service based on the confirmation result of the registration location of the wireless terminal. Therefore, the problems of “deterioration induced by retry of call establishment to another network due to failure of receiving a call” and “narrow mobility range” are solved by the applicant’s invention.

**Sundar ‘650**

Sundar ‘650, on the other hand, overall discloses a method of internetworking between wireless local area networks and wide area mobile wireless networks. Sundar ‘650 nowhere mentions the problems of “deterioration induced by retry of call establishment to another network due to failure of receiving a call”, “narrow mobility range” and “disconnection of a speech when a user moves from the wireless networks to the wired networks or from the wired networks to the wireless networks”, and thus it is impossible for Sundar ‘650 to take specially efforts to solve these problems. Moreover, Sundar ‘650 is silent of an automatic call forwarding service based on the confirmation

result of the registration location of the wireless terminal. Therefore, Sundar '650 is merely one of prior art of the applicant's invention.

**Difference between Applicant's claim 9 and Sundar '650**

1. As discussed above, Sundar '650 is merely one of prior art of the applicant's invention and Sundar '650 does not solve the problems of "deterioration induced by retry of call establishment to another network due to failure of receiving a call", "narrow mobility range" and "disconnection of a speech when a user moves from the wireless networks to the wired networks or from the wired networks to the wireless networks". Conversely, the applicant's invention expressly points out these three existing problems in the contemporary techniques and defines novel apparatuses and methods in order to overcome these problems.

2. Sundar '650 nowhere explicitly teaches steps of "confirming...whether a location of the corresponding complex wireless terminal is registered in the mobile communication service area" and "providing, ... a communication through the base station controller and base station transceiver subsystem by trying to connect an incoming to the complex wireless terminal using the mobile communication phone number, and ...(providing) the communication through a public exchange by trying to connect the incoming to the complex wireless terminal using the public phone number and the wireless terminal unique number". On the other hand, the applicant defines an automatic call forwarding service based on the confirmation result of the registration location of the wireless terminal, in order to realize, as the essential purpose of the applicant's invention, a communication

system without the problems of “deterioration induced by retry of call establishment to another network due to failure of receiving a call”, “narrow mobility range” and “disconnection of a speech when a user moves from the wireless networks to the wired networks or from the wired networks to the wireless networks”.

3. As described in the applicant’s claim 9, the information “whether the terminal is located in the premises” stored in a HLR (home location register), i.e., the information “whether the terminal is located in an extension wireless service area” is the basis according to which the MSC (mobile switching center) transfers the incoming call through a network corresponding to the location information of the complex wireless terminal. Sundar ‘650 however, fails to teach a HLR storing the information whether the terminal is located in the premises and thus it is impossible for Sundar ‘650 to provide an automatic call forwarding service based on the registration location of the terminal.

Sandar ‘650 also fails to discuss that the HLR stores a public phone number and wireless terminal unique number, while these numbers are respectively employed by the applicant’s mobile switching center for trying to connect the incoming call according to the registration location of the terminal.

4. The Examiner improperly cited Sandar ‘650 paragraphs [0073], [0074], [0079] and [0080] as supporting materials for rejecting the applicant’s claim 9, because these four paragraphs concern a contemporary handoff procedure between WLAN and WWAN. The applicant’s claim 9, conversely, focuses on a procedure of receiving an incoming call without a motion of the terminal between

different networks. Therefore, the Examiner's proposed comparison between Sandar '650 and the applicant's claim 9 regarding the step of providing a communication for an incoming call is **NOT** proper.

Furthermore, Sundar '650's handoff procedure is completed different from the applicant's proposed steps while a terminal making a call moves between different networks as defined in the applicant's claims 10-12. Sandar's handoff procedure involves a hard handover between WLAN and WWAN when a terminal engaged in a call moves between WLAN and WWAN, however, the applicant's invention maintains the communication line or automatically establishes a new communication line in order to avoid a discontinuation of the call during the motion of the terminal. Clearly, Sundar '650 does not solve the problem of discontinuation of the call during the motion of the terminal and is merely considered as one of the prior art of the applicant's invention.

5. Sundar '650 nowhere mentions or suggests an employment of the public phone number and the wireless terminal unique number during providing the communication for the incoming call as the applicant's claim 9 defines.

In all, Sundar '650 is merely one of prior art of the applicant's invention and does not teach an automatic call forwarding service based on the confirmation result of the registration location of the wireless terminal as defined in the applicant's invention.



**Difference between Applicant's claim 9 and Kil '859**

The Examiner then asserts that Kil '859 discloses a wired and wireless complex gateway 12 for providing a communication through an extension wireless service network, and providing the communication through a public exchange by trying to connect the incoming to the complex wireless terminal using the public phone number and the wireless terminal unique number. The applicant's does not agree with the Examiner's assertion.

Kil '859's FIG. 5 shows a database stored in a pVLR (private visitor location register) which is one of the components of the HLR and this VLR (visitor location register) has a mobile identification number, wire terminal's extension number and a subscriber's name. The applicant's claim 9 however, as shown in Table 1, expressly defines "a mobile communication phone number", "public phone number" and "wireless terminal unique number" which are contained in the HLR. Kil '589's mobile identification number and wire terminal's extension number are different from the applicant's "public phone number" and "wireless terminal unique number". Additionally, the applicant's HLR further includes "information whether the phone number is located inside or outside an extension wireless service area".

Kil '859 fails to teach "public phone number" and "wireless terminal unique number" as defined in the applicant's claim 9, and thus merely a related art of the applicant's invention.

Therefore, it is not possible for Kil '859 to define or suggest a step of providing the communication through a public exchange by trying to connect the incoming call to the complex wireless terminal using the public phone number and the wireless terminal unique number.

**Discussion of the Combination of Sundar '650 and Kil '859**

**First**, neither Sundar '650 nor Kil '859 uses language or the terminology attributed to them by the Examiner's foregoing assertions. The applicant observes that the Examiner's language is taught only by the applicant's claims, because the record of this prosecution history is devoid of any other source. The rejection therefore fails to make a prima facie showing of obviousness.

**Second**, the foregoing assertion about the teachings of Sundar '650 appears nowhere in the specification of Sundar '650. In point of fact, the only place that the content of this assertion appears in the entire prosecution history of the above-captioned application is in the applicant's claim 9. The fact that in the entirety of the U.S. Patent & Trademark Office's collection of worldwide scientific literature, the foregoing description of a novel device appears nowhere, but may be found only in the applicant's claim 9 is significant, and weighs favorably on the question of patentability. The Examiner is expressly requested to acknowledge this fact in future Office correspondence.

**Third**, the fact that Paper No. 20080507 was unable to find any description of the applicant's invention among the several tens of millions of items in its database of prior art, and was instead required to repeat the language of the applicant's claim 9 in order to characterize the prior art, is irrefutable evidence of the novelty of the device defined by the applicant's claim 9. Moreover, this resort to plagiarism of the text of the applicant's claim is convincing evidence of a hindsight reconstruction of the prior art in the light provided by Applicant alone. Continued maintenance of this rejection is therefore improper.

Because Sundar '650 does not teach an automatic call forwarding service based on the confirmation result of the registration location of the wireless terminal, and Kil '859 fails to teach "public phone number" and "wireless terminal unique number", the applicant respectively argues that the Examiner's proposed combination of Sundar '650 and Kil '859 fails to define the applicant's claim 9. The Examiner is respectively asked to reconsider the applicant's claim 9.

**Fourth**, in applicant's claim 9, the complex wireless terminal for supporting plural band service and plural mode service is expressly defined. According to the applicant's paragraphs [0031] through [0033], the applicant's complex wireless terminal for supporting plural band service and plural mode service refer to a wireless terminal providing a plural band service and a plural mode service. For example, the complex wireless terminal may support dual band/dual mode which can provide a function of the mobile phone and a function of the mobile communication simultaneously. As another example, the mobile terminal of the dual band/dual mode may simultaneously providing the functions of wireless phone and mobile communication may be called a dual band terminal since this terminal can support both a frequency band used in wireless phone and a frequency band used in a mobile communication, and may be also called a dual mode terminal since this terminal can support both a wireless phone mode and a mobile communication mode. Besides the above two examples, there is a PCS/AMPS typed mobile terminal as the dual mode mobile terminal and a GSM900/GSM1800 as the dual band mobile terminal. Such a plural band/plural mode mobile terminal can be operated in both single band/single mode and dual band/dual mode by a user's manual operation. In the applicant's invention, plural band service and plural mode service are

selected among code-division multiple access, group special mobile, wideband code division multiple access, wireless local area network, and BLUETOOTH communication methods.

Conversely, none of the cited references suggests or teaches a wireless terminal supporting plural band service and plural mode service selected among code-division multiple access, group special mobile, wideband code division multiple access, wireless local area network, and BLUETOOTH communication methods. The definition of a wireless terminal supporting plural band service and plural mode service can not be found in the applicant's invention.

Therefore, the Examiner proposed combination of Sundar '650 and Kil '859 fails to teach the applicant's claim 9.

**II. Claims 10-12 and 39 are rejected under 35 U.S.C. §103 as being unpatentable over Sundar et al. '650 in view of Ibe (US 2004/0087307).**

The Examiner states that the applicant's claims 10 and 39 are rejected as being unpatentable over Sundar '650 in view of Ibe '307. The applicant respectively disagrees with the Examiner's assertion.

The applicant realizes that Ibe '307 teaches that "the cellular proxy maintains a record of the cellular network that each enterprise mobile device is associated with". See paragraph [0027].

The maintenance of a record of the cellular network that each enterprise mobile device is associated with, is a different concept compared to the maintenance of a communication between the wireless terminal and the designated network. The maintenance of the record of the cellular network does not necessarily guarantee the maintenance of the communication itself. Therefore, Ibe

'307 nowhere suggests a maintainment of a communication.

The applicant's claims 10 and 39 defines a step of "maintaining the communication when the complex wireless terminal engaged in a call moves between an extension wireless network service area and a mobile communication network service area" and this step avoids a discontinuation of the speech when the wireless mobile enters an extension wireless network service area.

Therefore, the Examiner's proposed combination of Sundar '650 and Ibe '307 fails to teach the applicant's claims 10 and 39.

Regarding the Examiner's rejection to claims 11 and 12 based on over Sundar '650 in view of Ibe '307, claims 11 and 12 do not define a maintainment of a communication but defines an automatic call forwarding service based on the confirmation result of the registration location of the wireless terminal. Therefore, the applicant's respectively argues that the Examiner's rejection is lack of basis.

The Examiner is respectively asked to reconsider the applicant's claims 10-12 and 39 .

#### **Allowable Subject Matter**

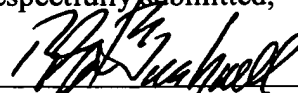
Claims 13, 31-38 would be allowable if rewritten or overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in the Office action.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the

examiner is asked to contact the applicant's attorney.

No fee is incurred by this Amendment.

Respectfully submitted,



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